



March 15, 2006

Mr. Steve Maybury
New Jersey Department of Environmental Protection
Site Remediation & Waste Management
Division of Remediation Management and Response
Bureau of Northern Case Management
401 East State Street, 5th Floor
Trenton, New Jersey 08625-0028

Subject: Response Plan

Reference: Edgewood Property Site - Applegarth, Monroe Township, NJ

Dear Steve:

On behalf of Ford Motor Company, Tetra Tech is submitting the attached Response Plan for the removal of crushed concrete material at the Applegarth site. This plan incorporates the specific requirements as outlined in the NJDEP Administrative Order issued to Ford Motor Company (Ford) on March 8, 2006 (EA ID #: PI V1166).

All information in this Plan concerning the crushed concrete on the Applegarth site Property, including the origin of that crushed concrete, was obtained from EPI and/or from discussions with its employees, agents, and contractors. Other than sample data obtained by Tetra Tech or visual data collected by Tetra Tech employees, Tetra Tech has relied on this information in drafting this Response Plan.

This plan details the removal and disposal of crushed concrete material currently located on the Applegarth property that was reportedly transported from the former Ford Edison Assembly Plant property located at 939 U.S. Highway Route 1 in Edison, New Jersey by Edgewood Properties Inc. (EPI). This Response Plan addresses the following major elements:

1. Identify and remove material, and dispose of material at an approved disposal facility.
2. Implement and maintain dust control measures including air monitoring.
3. Provide disposal tracking logs and documentation for the crushed concrete materials removed from the Applegarth property.

4. Collect and analyze “post-excavation” samples from the soil located below the removed material to insure that no material is left at the site.
5. Submit progress reports to the NJDEP.

Ford intends to dispose of these materials at the following permitted facilities: MCUA Middlesex County Landfill in East Brunswick, New Jersey and BFI Conestoga Landfill in Morgantown, Pennsylvania. In order to meet the timing set forth in this Plan it is anticipated that use of both of these disposal facilities will be required. The sampling will be performed in accordance with the NJDEP Technical Requirements for Site Remediation.

Current Summary

The Applegarth site is located at the Intersection of Applegarth Road and Cranbury-Half Acre Road, Monroe Township, New Jersey. The site is approximately 18 acres and currently under development. Surrounding properties include wooded and undeveloped land. The parcel is being developed as a retail/professional office center. No truck access or loading restrictions were observed. Per EPI, they conducted sampling in 16 test pits in the area where the crushed concrete material was potentially used on-site as fill and from the three stock pile locations.

Crushed concrete is being stored at three stockpiled locations as described below:

Location #1 – Pile #1: The dimensions of Pile #1 are approximately 30 feet by 125 feet by 6 feet high (triangular in shape with a fairly uniform peak) and contains approximately 500 cubic yards of material.

Location #2 – Pile #2: The pile is stored on a soil base and abuts a borrow pit. The dimensions of this pile are 65 feet by 55 feet by about 15 feet high at its peak. This stockpile is triangular in shape and contains approximately 1,000 cubic yards of material.

Location #3 – Pile #3: The pile is stored on a soil base and abuts a borrow pit. The dimensions of this pile were 50 feet by 105 feet by about 6 feet high (fairly uniform peak). This stockpile was triangular in shape and contained approximately 500 cubic yards of material. This pile was consolidated into Pile # 1.

Location # 4 – In-situ: Additionally, according to EPI, seven to ten acres of the Applegarth site was filled with a combination of approximately 10,000 to 20,000 cubic yards of crushed concrete material and approximately 60,000 to 70,000 cubic yards of other material. This combined material was reportedly used on-site at intermittent depths up to four feet below grade over at least half of the property.

Investigation and Delineation Sampling

On November 30, 2005 Tetra Tech collected four samples from the crushed concrete material temporarily stockpiled on the site. The samples were analyzed for Total Petroleum Hydrocarbons (TPH), RCRA Characteristics and Full Toxicity Characteristic

Leaching Procedure (TCLP) Parameters. Also, on January 9, 2006, Tetra Tech collected four additional samples to be analyzed for Petroleum Aromatic Hydrocarbons (PAHs) since these were not analyzed initially. Results from the sampling conducted by Tetra Tech are presented in Attachment 2. In summary, there were eight exceedances of the NJ Residential Direct Contact Soil Cleanup Criteria (RDCSCC) and NJ Non-Residential Direct Contact Soil Cleanup Criteria (NRDCSCC) for PAHs (i.e. Benzo(a)pyrene, Benzo(k)fluoranthrene, Benzo(b)fluoranthrene, etc.).

In addition, Environmental Liability Management (ELM) collected 16 samples of mixed crushed concrete and soil from test pits excavated across the site and one sample from each of the three crushed concrete piles. The samples were collected on September 22, 2005 and were analyzed for TPH, PAHs, and Polychlorinated biphenyls (PCBs). There was one exceedance of the NJDEP Action Level for TPH (10,000 ppm), PAH concentrations exceeding the NJ RDCSCC and NRDCSCC, and PCBs detected in 15 of the samples, one of the samples exceeded the NRDCSCC for PCBs. The results are presented in Table 4 in Attachment 2.

With respect to material used as fill on other portions of the site, the 16 test pits excavated by EPI will be utilized as a baseline to assess the extent of the subsurface material containing crushed concrete. Additional test pits and/or soil borings may be required to confirm the extent of subsurface fill containing crushed concrete. To assess if additional test pits are required, the 16 previous test pits advanced by EPI will be reviewed to assess if concrete material is present at the boundary of the test pit/sample area, thereby indicating a likelihood of crushed concrete beyond this boundary. Any additional test pits and/or soil borings performed for delineation purposes will be advanced until they contain no visual indication of aggregate material. Where crushed concrete material is found, additional samples will be collected every 500 cubic yards to meet the anticipated disposal requirements. At this juncture, the number of samples to be collected associated with the “fill area” (location #4) cannot be estimated.

The collected crushed concrete material will be placed into a stainless steel bowl and homogenized using a stainless steel scoop/spoon to obtain a representative sample. Sampling personnel will then transfer material from the stainless steel bowl into sampling containers provided by the laboratory. Samplers will wear nitrile gloves during sampling activities to protect the sampler from potential contamination by the sampled material, as well as prevent potential contamination of the sample by the sampler.

In accordance with the analytical testing parameters required by the disposal facility, collected samples will be analyzed for Toxicity Characteristic Leaching Procedure (TCLP) Volatile Organic Compounds (VOCs); TCLP SVOCs; TCLP Pesticides; TCLP Herbicides; TCLP Metals, Resource Conservation and Recovery Act (RCRA) Characteristics (corrosivity, reactivity, ignitability), PCBs, PAH and TPH. STL of Edison, New Jersey, a New Jersey certified laboratory will perform the analytical testing of collected samples. Laboratory analyses will be conducted on an accelerated turn-around-time (TAT) of 1 week (5 working days).

Tetra Tech field personnel will decontaminate all non-disposable sampling equipment (e.g., shovels, hand augers, stainless steel bowls and scoops/spoons) between sampling locations in general accordance with Chapter 2A, Section 4.2 of the NJDEP Sampling Manual dated August 2005, with the exception that decontamination waters will be disposed of on-site. Tetra Tech personnel will use an Alconox[®] detergent wash as the first step in decontamination of field equipment.

Sample containers will be placed inside sealable plastic bags and then placed inside coolers provided by the lab. All samples will be preserved in the coolers with ice to maintain a temperature below 4°C. A temperature blank consisting of a bottle of de-ionized water will accompany the cooler throughout the sampling program and laboratory personnel will use it for temperature validation upon receipt of the cooler at the laboratory. Coolers not containing ice, or whose temperature is above 4°C, will receive a notice of non-compliance with the testing method. Chain of custodies (COC's) will be prepared by the sampler while on site and signed off by the sampler and the receiving lab personnel at the time of submission. The sampler will complete an entry in their field logbook of when sampling began, what samples were taken, when sampling was completed and any adverse condition which may have an impact on the sample or sampling activity.

Removal and Disposal Procedure

To date, some of the materials have been removed from the site. Specifically, material was excavated and removed on February 27th and 28th, March 1-3, and March 6th. In total, 1,820 tons (approximately 1,040 cubic yards) of material have been removed from the site. These materials were sent to the Casie ProTank facility in Vineland, NJ. The material is currently located at the Casie facility. Pending NJDEP approval, the material will be sent from Casie to its final disposal location, Gloucester County Landfill.

All stockpiled crushed concrete material will be removed based on visual determination. If post removal laboratory samples indicate that additional soil below the stockpile locations needs to be removed, these removal actions will be conducted in accordance with this Plan. A site access agreement is in place between the site owner and Ford. Transportation of the material will be conducted by a licensed solid waste hauler. Based upon characterization data, the material will be transported off-site for disposal. No material will leave the site without prior written approval from the NJDEP.

Ford submits the following two options to address the in-situ material at the Applegarth site.

- 1) In-situ Removal Option 1
All in-situ crushed concrete material will be removed and disposed.
- 2) In-situ Removal Option 2
After the limits of the crushed concrete material are defined, the in-situ material would remain on-site if appropriate approvals are obtained. Ford

and Edgewood would mutually agree to the final plans if this is to occur. If materials remain in-situ, the parties will comply with the NJDEP Technical Requirements for Site Remediation. Appropriate institutional controls will also be put in place upon NJDEP approval.

Dust Management Plan

All on-site activities will be conducted in a manner to minimize fugitive dust emissions. To accomplish this, the following controls will be implemented:

- All material to be removed from the site will be covered properly to prevent dust migration
- A water truck and water spray will be used to control dust during removal and loading activities. Additionally, a road sweeper will be used at the site for routine road maintenance to actively control dust emissions.
- A real-time air monitoring program will be implemented before any removal work is performed. This will include monitoring of dust in the exclusion zone, at the perimeter of the site, and for personnel working in the exclusion zone. Also, a meteorological station will be placed at the site to record information such as daily temperatures, wind speed and direction, etc.
- Prior to trucks departing the site, proper decontamination of the vehicles/equipment will take place. Ford will use a crushed stone truck pad to perform dry decontamination of all trucks prior to their departure from the site. This control will adequately address the concern for crushed concrete material leaving the site.

Ford will immediately cease removal activities at the site if any of the air monitoring action levels or other standards in the attached dust management program is exceeded. In addition, Ford will cease work if the control measures detailed in this Plan or any other provisions of the Administrative Order, regulations or law, are not being met. If this occurs, Ford will not resume work activities until the issues are resolved to the satisfaction of NJDEP.

The specific activities to be conducted for the air monitoring at the site are presented in Attachment 3.

Post Removal Sampling

In accordance with the NJDEP Technical Requirements for Site Remediation, post-excavation samples will be collected from all four (4) locations after the crushed concrete material is removed. (Bottom of excavation - 1 sample per 900 square feet; Sidewall – 1 sample for every 30 linear feet of sidewall). The post-excavation samples will be analyzed for PCBs by Severn Trent Laboratories, is a NJ certified laboratory. Laboratory analysis will be performed on an accelerated turn-around time of 1-week (5 working days). After receipt of analytical data, Ford Motor Co. will confirm PCBs greater than the appropriate RDCSCC do not remain in the areas excavated. If

contaminants exceed the RDCSCC in the areas of excavation, additional excavation will occur.

Reporting

As required in the Administrative Order, Ford will provide the following information:

- Progress reports will be submitted to the NJDEP and the designated official from Monroe Township on the 1st and 16th of each month of removal activity at the site. The progress report will include a summary of activities conducted and results of air monitoring for the period being summarized.
- A final report will be issued to the NJDEP and Monroe Township officials within 14 days after completion of all remedial action activities and receipt of final analytical data. The final report will include a discussion of the procedures taken to eliminate all possible exposure from the material removed and the effectiveness of the procedures implemented to control fugitive dust emissions. The report will also include origin and disposal forms pursuant to Solid Waste Management regulations that identify all material removed from the site. This information will include the weight of the material and equivalent cubic yards.
- Other reports required by the NJDEP or other significant correspondence issued to the NJDEP will be provided to Monroe Township officials.

Schedule

Ford will initiate work for the above referenced activities within 2 days after written approval from the NJDEP. Ford Motor Co. will complete remedial action activities associated with the stockpiled material within 30 days after approval of this plan. Due to the large amount of in-situ material at this site, it is not safe or practical to attempt to remove this material within 30 days. Therefore, if the in-situ material is removed, remedial action activities will be completed within 60 days after approval of this plan.

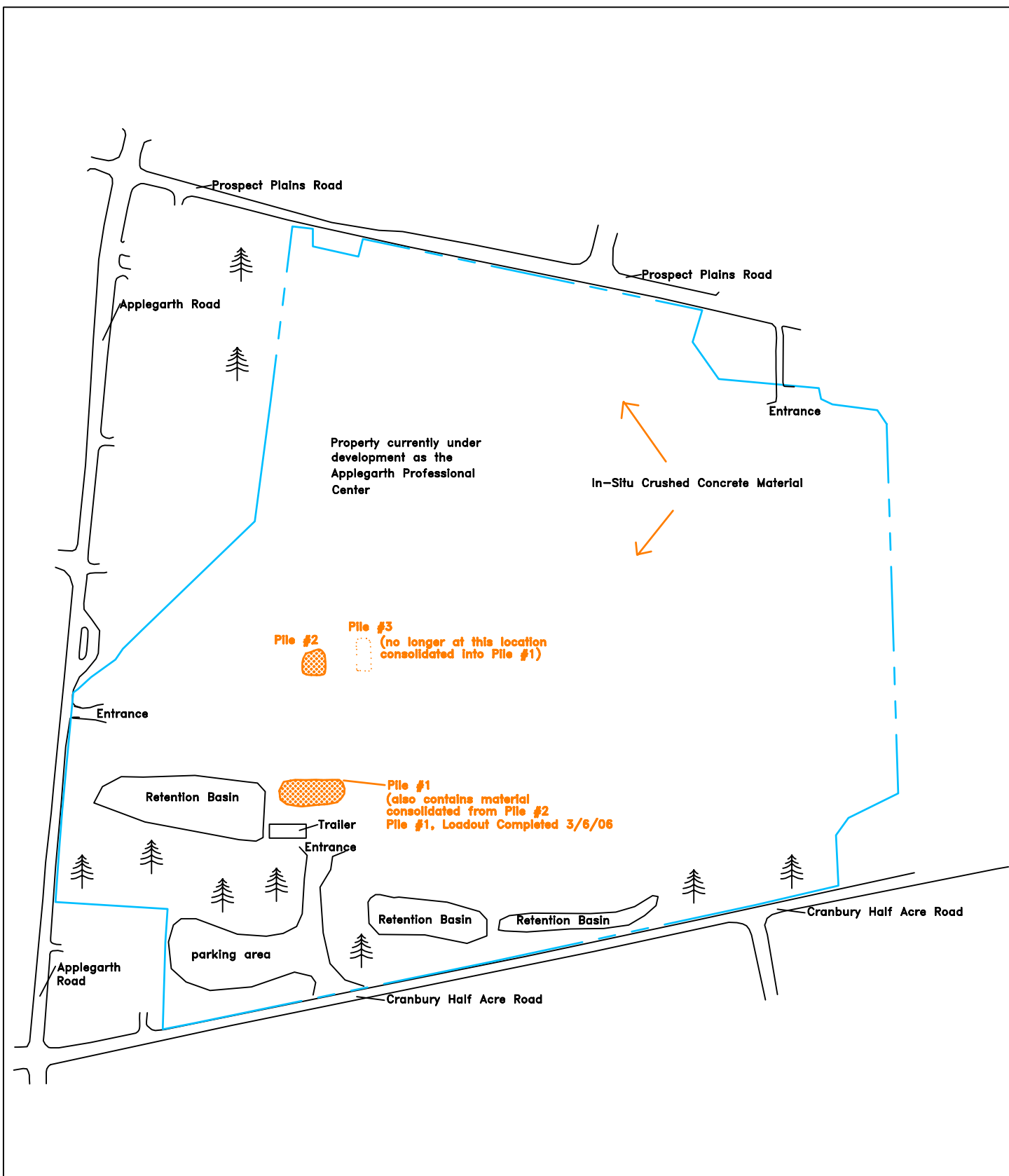
Ford Motor Company will notify you prior to the start of any on-site activities and immediately if there are any changes to the schedule. If you have any questions, please contact me at 973-659-9996, extension 231.

Sincerely,

A handwritten signature in cursive script that reads "Douglas Sullivan".

Douglas Sullivan
Senior Project Manager

ATTACHMENT 1
(Site Map)



TETRA TECH
ENGINEERS ARCHITECTS SCIENTISTS
Rockaway 80 Corporate Center
100 Enterprise Drive, Suite 400
Rockaway, New Jersey 07866
973 659-9996 973 659-1287

LEGEND

- Approx. Property Boundary
- Material from the Ford Edison property
- Indicates wooded area

SITE ID: Applegarth property
Applegarth and Cranbury Half Acre Road
Monroe, New Jersey

CLIENT: Ford Motor Company

SCALE
1" = 450'

DRAWN BY:
JB

CHECKED BY:
DS

PLOT DATE:
3/13/2006

SITE MAP



ATTACHMENT 2
(Characterization Data)

Aggregate Material Characterization Results - Applegarth

Sample ID	Lab ID	Date Sampled	Analyte	RDCSCC (ppm)	NRDCSCC (ppm)	Haz Waste Level	Result	Units	Qual.	Exceeds Res. Crit.	Exceeds Non-Res. Crit.	Exceeds Haz Waste Level
AGP1	700617	1/9/2006	Fluoranthene	2300	10000		8.4	ppm				
AGP1	700617	1/9/2006	Indeno[1,2,3-cd]pyrene	0.9	4		1.2	ppm		Yes		
AGP1	700617	1/9/2006	Benzo[g,h,i]perylene				1.2	ppm				
AGP1	700617	1/9/2006	Fluorene	2300	10000		0.4	ppm	J			
AGP1	700617	1/9/2006	Acenaphthylene				0.033	ppm	J			
AGP1	700617	1/9/2006	Naphthalene	230	4200		0.078	ppm	J			
AGP1	700617	1/9/2006	Benzo(a)pyrene	0.66	0.66		3.5	ppm		Yes	Yes	
AGP1	700617	1/9/2006	Acenaphthene	3400	10000		0.45	ppm	J			
AGP1	700617	1/9/2006	Dibenz(a,h)anthracene	0.66	0.66		0.42	ppm				
AGP1	700617	1/9/2006	Anthracene	10000	10000		1.3	ppm				
AGP1	700617	1/9/2006	Chrysene	9	40		4.3	ppm				
AGP1	700617	1/9/2006	Benzo(k)fluoranthene	0.9	4		4	ppm		Yes		
AGP1	700617	1/9/2006	Benzo[b]fluoranthene (3,4-Benzofl	0.9	4		3	ppm		Yes		
AGP1	700617	1/9/2006	Benzo(a)anthracene	0.9	4		4	ppm		Yes		
AGP1	700617	1/9/2006	Pyrene	1700	10000		8.2	ppm				
AGP1	700617	1/9/2006	Phenanthrene				4.2	ppm				
AGP2	700618	1/9/2006	Benzo(k)fluoranthene	0.9	4		8	ppm		Yes	Yes	
AGP2	700618	1/9/2006	Anthracene	10000	10000		3.1	ppm				
AGP2	700618	1/9/2006	Benzo(a)anthracene	0.9	4		9.3	ppm		Yes	Yes	
AGP2	700618	1/9/2006	Phenanthrene				11	ppm				
AGP2	700618	1/9/2006	Fluorene	2300	10000		1.1	ppm	J			
AGP2	700618	1/9/2006	Fluoranthene	2300	10000		21	ppm				
AGP2	700618	1/9/2006	Dibenz(a,h)anthracene	0.66	0.66		1	ppm		Yes	Yes	

Aggregate Material Characterization Results

Applegarth

Sample ID	Lab ID	Date Sampled	Analyte	RDCSCC (ppm)	NRDCSCC (ppm)	Haz Waste Level	Result	Units	Qual.	Exceeds Res. Crit.	Exceeds Non-Res. Crit.	Exceeds Haz Waste Level
AGP2	700618	1/9/2006	Chrysene	9	40		9.3	ppm		Yes		
AGP2	700618	1/9/2006	Pyrene	1700	10000		18	ppm				
AGP2	700618	1/9/2006	Benzo[g,h,i]perylene				2.8	ppm				
AGP2	700618	1/9/2006	Benzo[b]fluoranthene (3,4-Benzofl	0.9	4		6.6	ppm		Yes	Yes	
AGP2	700618	1/9/2006	Benzo(a)pyrene	0.66	0.66		7.4	ppm		Yes	Yes	
AGP2	700618	1/9/2006	Naphthalene	230	4200		0.3	ppm	J			
AGP2	700618	1/9/2006	Acenaphthene	3400	10000		1	ppm	J			
AGP2	700618	1/9/2006	Acenaphthylene				0.074	ppm	J			
AGP2	700618	1/9/2006	Indeno[1,2,3-cd]pyrene	0.9	4		2.8	ppm		Yes		
AGP3	700619	1/9/2006	Pyrene	1700	10000		11	ppm				
AGP3	700619	1/9/2006	Phenanthrene				6.6	ppm				
AGP3	700619	1/9/2006	Anthracene	10000	10000		1.8	ppm	J			
AGP3	700619	1/9/2006	Acenaphthene	3400	10000		0.64	ppm	J			
AGP3	700619	1/9/2006	Fluoranthene	2300	10000		12	ppm				
AGP3	700619	1/9/2006	Fluorene	2300	10000		0.64	ppm	J			
AGP3	700619	1/9/2006	Benzo[g,h,i]perylene				2.4	ppm				
AGP3	700619	1/9/2006	Benzo[b]fluoranthene (3,4-Benzofl	0.9	4		3.8	ppm		Yes		
AGP3	700619	1/9/2006	Chrysene	9	40		6	ppm				
AGP3	700619	1/9/2006	Benzo(a)pyrene	0.66	0.66		4.8	ppm		Yes	Yes	
AGP3	700619	1/9/2006	Benzo(a)anthracene	0.9	4		5.6	ppm		Yes	Yes	
AGP3	700619	1/9/2006	Dibenz(a,h)anthracene	0.66	0.66		0.23	ppm				
AGP3	700619	1/9/2006	Benzo(k)fluoranthene	0.9	4		4.6	ppm		Yes	Yes	
AGP3	700619	1/9/2006	Naphthalene	230	4200		0.19	ppm	J			
AGP3	700619	1/9/2006	Indeno[1,2,3-cd]pyrene	0.9	4		2.3	ppm		Yes		

Aggregate Material Characterization Results

Applegarth

Sample ID	Lab ID	Date Sampled	Analyte	RDCSCC (ppm)	NRDCSCC (ppm)	Haz Waste Level	Result	Units	Qual.	Exceeds Res. Crit.	Exceeds Non-Res. Crit.	Exceeds Haz Waste Level
AGP4	700620	1/9/2006	Indeno[1,2,3-cd]pyrene	0.9	4		1.5	ppm		Yes		
AGP4	700620	1/9/2006	Acenaphthene	3400	10000		0.58	ppm	J			
AGP4	700620	1/9/2006	Benzo(k)fluoranthene	0.9	4		5.7	ppm		Yes	Yes	
AGP4	700620	1/9/2006	Dibenz(a,h)anthracene	0.66	0.66		0.17	ppm				
AGP4	700620	1/9/2006	Benzo(a)pyrene	0.66	0.66		4.7	ppm		Yes	Yes	
AGP4	700620	1/9/2006	Benzo[b]fluoranthene (3,4-Benzofl	0.9	4		4.5	ppm		Yes	Yes	
AGP4	700620	1/9/2006	Fluoranthene	2300	10000		12	ppm				
AGP4	700620	1/9/2006	Acenaphthylene				0.045	ppm	J			
AGP4	700620	1/9/2006	Pyrene	1700	10000		15	ppm				
AGP4	700620	1/9/2006	Anthracene	10000	10000		1.6	ppm				
AGP4	700620	1/9/2006	Benzo[g,h,i]perylene				1.4	ppm				
AGP4	700620	1/9/2006	Chrysene	9	40		5.8	ppm				
AGP4	700620	1/9/2006	Fluorene	2300	10000		0.53	ppm	J			
AGP4	700620	1/9/2006	Benzo(a)anthracene	0.9	4		5.6	ppm		Yes	Yes	
AGP4	700620	1/9/2006	Naphthalene	230	4200		0.16	ppm	J			
AGP4	700620	1/9/2006	Phenanthrene				5.5	ppm				
Apple-001-TT	690698	11/30/2005	Barium	700	47000	100	66.4	ppm				
Apple-001-TT	690698	11/30/2005	Arsenic	20	20	5	3.5	ppm				
Apple-001-TT	690698	11/30/2005	Mercury	14	270	0.2	0.03	ppm				
Apple-001-TT	690698	11/30/2005	Barium	700	47000	100	0.32	ppm	B			
Apple-001-TT	690698	11/30/2005	Chromium			5	0.01	ppm	B			
Apple-001-TT	690698	11/30/2005	Ignitability				160	deg F				
Apple-001-TT	690698	11/30/2005	Total Petroleum Hydrocarbons				995	ppm				
Apple-001-TT	690698	11/30/2005	Corrosivity	12.5	12.5		10.72	std unit				

Aggregate Material Characterization Results - Applegarth

Sample ID	Lab ID	Date Sampled	Analyte	RDCSCC (ppm)	NRDCSCC (ppm)	Haz Waste Level	Result	Units	Qual.	Exceeds Res. Crit.	Exceeds Non-Res. Crit.	Exceeds Haz Waste Level
Apple-002-TT	690699	11/30/2005	Ignitability				160	deg F				
Apple-002-TT	690699	11/30/2005	Barium	700	47000	100	0.41	ppm	B			
Apple-002-TT	690699	11/30/2005	Corrosivity	12.5	12.5		10.75	std unit				
Apple-002-TT	690699	11/30/2005	Mercury	14	270	0.2	0.02	ppm	B			
Apple-002-TT	690699	11/30/2005	Barium	700	47000	100	60.4	ppm				
Apple-002-TT	690699	11/30/2005	Total Petroleum Hydrocarbons				534	ppm				
Apple-002-TT	690699	11/30/2005	Arsenic	20	20	5	2.8	ppm				
Apple-003-TT	690700	11/30/2005	Barium	700	47000	100	0.27	ppm	B			
Apple-003-TT	690700	11/30/2005	Ignitability				160	deg F				
Apple-003-TT	690700	11/30/2005	Mercury	14	270	0.2	0.08	ppm				
Apple-003-TT	690700	11/30/2005	Barium	700	47000	100	50.1	ppm				
Apple-003-TT	690700	11/30/2005	Total Petroleum Hydrocarbons	3500	3500		597	ppm				
Apple-003-TT	690700	11/30/2005	Arsenic	20	20	5	4.2	ppm				
Apple-003-TT	690700	11/30/2005	Corrosivity	12.5	12.5		9.81	std unit				
Apple-004-TT	690701	11/30/2005	Total Petroleum Hydrocarbons				1120	ppm				
Apple-004-TT	690701	11/30/2005	Ignitability				160	deg F				
Apple-004-TT	690701	11/30/2005	Corrosivity	12.5	12.5		10.18	std unit				
Apple-004-TT	690701	11/30/2005	Arsenic	20	20	5	4.2	ppm				
Apple-004-TT	690701	11/30/2005	Barium	700	47000	100	0.49	ppm	B			
Apple-004-TT	690701	11/30/2005	Mercury	14	270	0.2	0.03	ppm				
Apple-004-TT	690701	11/30/2005	Lead	400	600		0.02	ppm	B			
Apple-004-TT	690701	11/30/2005	Barium	700	47000	100	45.5	ppm				

Table 4
Summary of Crushed Concrete Sampling Analytical Results
Applegarth - Edgewood

Sample ID	NJDEP			TP-1-4		TP-3-4		TP-4-0.5		TP-5-1.25		TP-6-0.5		TP-6-5		TP-7-0.5		TP-7-5.5		TP-8-0		TP-9-0.5	
Lab Sample Number	Soil Cleanup			671817		671818		671819		671820		671821		671822		671823		671824		671825		671826	
Sampling Date	Criteria			09/22/05		09/22/05		09/22/05		09/22/05		09/22/05		09/22/05		09/22/05		09/22/05		09/22/05		09/22/05	
Matrix	Residential	Non-Residential	Impact to	SOLID		SOLID		SOLID		SOLID		SOLID		SOLID		SOLID		SOLID		SOLID		SOLID	
Sample Depth (feet)	Direct Contact	Direct Contact	Ground Water	4-4.5'		4-4.5'		0.5-1'		1.25-1.75'		0.5-1'		5-5.5'		0.5-1'		5.5-6'		0-0.5'		0.5-1'	
Units	mg/kg	mg/kg	mg/kg	mg/kg		mg/kg		mg/kg		mg/kg		mg/kg		mg/kg		mg/kg		mg/kg		mg/kg		mg/kg	
Total Petroleum Hydrocarbons	10000 *	10000 *	10000 *	943		159		1,090		25	U	37.6		102		917		25	U	140		900	
Polyaromatic Hydrocarbons																							
Acenaphthene	3,400	10,000	100	0.99	J	0.11	J	1.5	J	0.37	U	0.01	J	0.046	J	2.3	J	0.4	U	0.29	J	0.87	J
Acenaphthylene	NS	NS	NS	2	U	0.027	J	1.9	U	0.37	U	0.35	U	0.055	J	3.7	U	0.4	U	0.021	J	1.9	U
Anthracene	10,000	10,000	100	2.4		0.32	J	3.6		0.37	U	0.03	J	0.16	J	5.6		0.4	U	0.76		2	
Benzo(a)anthracene	0.9	4	500	4.3		0.97		5.9		0.035	J	0.14		0.57		17		0.04	U	2.4		3.5	
Benzo(a)pyrene	0.66	0.66	100	4		1		5.3		0.034	J	0.15		0.64		16		0.04	U	2.8		3.4	
Benzo(b)fluoranthene	0.9	4	50	3.1		0.86		4.3		0.032	J	0.11		0.51		13		0.04	U	2.6		2.9	
Benzo(g,h,i)perylene	NS	NS	NS	1.7	J	0.5		2.2		0.37	U	0.092	J	0.25	J	6		0.4	U	0.61		1.3	J
Benzo(k)fluoranthene	0.9	4	500	4		0.92		5.4		0.033	J	0.13		0.69		16		0.04	U	3		3.6	
Chrysene	9	40	500	4.5		1		6		0.044	J	0.14	J	0.68		19		0.4	U	2.7		3.8	
Dibenz(a,h)anthracene	0.66	0.66	100	0.54		3		0.73		0.037	U	0.035	U	0.083		2.1		0.04	U	0.27		0.46	
Fluoranthene	2,300	10,000	100	11		2.3		16		0.078	J	0.25	J	1.2		38		0.4	U	5		8.7	
Fluorene	2,300	10,000	100	1.1	J	0.1	J	1.6	J	0.37	U	0.35	U	0.058	J	2.4	J	0.4	U	0.25	J	0.92	J
Indeno(1,2,3-cd)pyrene	0.9	4	500	1.7		0.53		2.5		0.037	U	0.089		0.24		6.1		0.04	U	0.77		1.4	
Naphthalene	230	4,200	100	0.74	J	0.048	J	0.47	J	0.37	U	0.35	U	0.03	J	1	J	0.4	U	0.075	J	0.89	J
Phenanthrene	NS	NS	NS	10		1.2		14		0.044	J	0.12	J	0.72		23		0.4	U	2.6		9.2	
Pyrene	1,700	10,000	100	9		1.8		12		0.069	J	0.23	J	1.2		40		0.4	U	4.3		7.8	
PCBs																							
Aroclor-1016	NS	NS	NS	0.079	U	0.074	U	0.077	U	0.075	U	0.07	U	0.075	U	0.074	U	0.08	U	0.069	U	0.076	U
Aroclor-1221	NS	NS	NS	0.079	U	0.074	U	0.077	U	0.075	U	0.07	U	0.075	U	0.074	U	0.08	U	0.069	U	0.076	U
Aroclor-1232	NS	NS	NS	0.079	U	0.074	U	0.077	U	0.075	U	0.07	U	0.075	U	0.074	U	0.08	U	0.069	U	0.076	U
Aroclor-1242	NS	NS	NS	0.079	U	0.074	U	0.077	U	0.075	U	0.07	U	0.075	U	0.074	U	0.08	U	0.069	U	0.076	U
Aroclor-1248	NS	NS	NS	0.22		0.074	U	0.077	U	0.075	U	0.07	U	0.075	U	0.074	U	0.08	U	0.069	U	0.13	
Aroclor-1254	NS	NS	NS	0.079	U	0.074	U	0.077	U	0.075	U	0.07	U	0.1		0.074	U	0.08	U	0.069	U	0.076	U
Aroclor-1260	NS	NS	NS	0.14		0.074	U	0.12		0.075	U	0.07	U	0.075	U	0.46		0.08	U	0.069	U	0.11	
Aroclor-1262	NS	NS	NS	0.079	U	0.074	U	0.077	U	0.075	U	0.07	U	0.075	U	0.074	U	0.08	U	0.069	U	0.076	U
Aroclor-1268	NS	NS	NS	0.079	U	0.074	U	0.077	U	0.075	U	0.07	U	0.075	U	0.074	U	0.08	U	0.069	U	0.076	U
Total PCBs	0.49	2	50	0.36		0.074	U	0.12		0.075	U	0.07	U	0.1		0.46		0.08	U	0.069	U	0.24	

Bold indicates value exceeds criteria/standard

Notes:
U - Not detected above indicated level
J - Estimated concentration
NS - No Standard
* - Action Level

Table 4
Summary of Crushed Concrete Sampling Analytical Results
Applegarth - Edgewood

Sample ID	NJDEP			TP-10-0	TP-11-0		TP-11-3		TP-12-0.5		TP-12-2.5		TP-13-1		PILE-1		PILE-2		PILE-3		
Lab Sample Number	Soil Cleanup			671827	671828		671829		671830		671831		671832		671833		671834		671835		
Sampling Date	Criteria			09/22/05	09/22/05		09/22/05		09/22/05		09/22/05		09/22/05		09/22/05		09/22/05		09/22/05		
Matrix	Residential	Non-Residential	Impact to	SOLID	SOLID		SOLID		SOLID		SOLID		SOLID		SOLID		SOLID		SOLID		
Sample Depth (feet)	Direct Contact	Direct Contact	Ground Water	0-0.5'	0-0.5'		3-3.5'		0.5-1'		2.5-3'		1-1.5'								
Units	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg		mg/kg		mg/kg		mg/kg		mg/kg		mg/kg		mg/kg		mg/kg		
Total Petroleum Hydrocarbons	10000 *	10000 *	10000 *	792		1,850		10,600		1,040		1,290		1,500		326		1,050		1,260	
Polyaromatic Hydrocarbons																					
Acenaphthene	3,400	10,000	100	0.73	J	2.6	J	2.4		2.1		2.3		0.66	J	1.4		1.8		1	J
Acenaphthylene	NS	NS	NS	0.060	J	3.7	U	0.14	J	0.098	J	2.0	U	0.068	J	0.031	J	0.11	J	1.7	U
Anthracene	10,000	10,000	100	2.4		7.2		4.9		5.1		6		1.8		3.3		5.2		2.9	
Benzo(a)anthracene	0.9	4	500	8.1		20		10		12		11		6		5.3		14		10	
Benzo(a)pyrene	0.66	0.66	100	8		18		9.4		11		9.6		5.6		5		13		9.7	
Benzo(b)fluoranthene	0.9	4	50	7.9		15		9.4		9.4		7.4		4.9		4.8		12		8.1	
Benzo(g,h,i)perylene	NS	NS	NS	1.6		6.8		2.4		3.6		4		1.8		1.6		4.5		5	
Benzo(k)fluoranthene	0.9	4	500	7.9		16		11		10		8		5.1		5.4		11		9.1	
Chrysene	9	40	500	8.4		21		11		12		11		6.3		5.9		14		11	
Dibenz(a,h)anthracene	0.66	0.66	100	0.68		2.5		1.2		1.7		1.3		0.68		0.58		1.8		1.8	
Fluoranthene	2,300	10,000	100	15		53		27		29		26		12		14		32		20	
Fluorene	2,300	10,000	100	0.75		2.4	J	2.5		1.7	J	2.6		0.6	J	1.6		1.7	J	0.88	J
Indeno(1,2,3-cd)pyrene	0.9	4	500	1.9		7.4		2.7		4		4.3		2		1.6		4.9		5.2	
Naphthalene	230	4,200	100	0.16	J	0.74	J	1.1	J	0.28	J	1.8	J	0.16	J	1.5		0.4	J	0.22	J
Phenanthrene	NS	NS	NS	7.4		22		18		16		21		6.2		16		18		9.7	
Pyrene	1,700	10,000	100	14		41		23		24		20		11		12		25		16	
PCBs																					
Aroclor-1016	NS	NS	NS	0.074	U	0.074	U	0.14	U	0.074	U	0.081	U	0.069	U	0.074	U	0.07	U	0.069	U
Aroclor-1221	NS	NS	NS	0.074	U	0.074	U	0.14	U	0.074	U	0.081	U	0.069	U	0.074	U	0.07	U	0.069	U
Aroclor-1232	NS	NS	NS	0.074	U	0.074	U	0.14	U	0.074	U	0.081	U	0.069	U	0.074	U	0.07	U	0.069	U
Aroclor-1242	NS	NS	NS	0.074	U	0.074	U	0.14	U	0.074	U	0.31		0.069	U	0.074	U	0.07	U	0.069	U
Aroclor-1248	NS	NS	NS	0.074	U	0.074	U	0.14	U	0.074	U	0.081	U	0.069	U	0.074	U	0.07	U	0.069	U
Aroclor-1254	NS	NS	NS	0.074	U	0.074	U	0.14	U	0.18		0.081	U	0.18		0.074	U	0.18		0.22	
Aroclor-1260	NS	NS	NS	0.2		0.37		2.7		0.22		0.18		0.23		0.085		0.26		0.26	
Aroclor-1262	NS	NS	NS	0.074	U	0.074	U	0.14	U	0.074	U	0.081	U	0.069	U	0.074	U	0.07	U	0.069	U
Aroclor-1268	NS	NS	NS	0.074	U	0.074	U	0.14	U	0.074	U	0.081	U	0.069	U	0.074	U	0.07	U	0.069	U
Total PCBs	0.49	2	50	0.2		0.37		2.7		0.4		0.49		0.41		0.085		0.44		0.48	

Bold indicates value exceeds criteria/standard

Notes:
U - Not detected above indicated level
J - Estimated concentration
NS - No Standard
* - Action Level

ATTACHMENT 3
(Dust Management Plan)

DUST MONITORING PLAN

EXCLUSION ZONE MONITORING:

Purpose: Evaluate release of dust in zones to determine proper dust control measures.

- Exclusion zone (where work activities will occur) will be established.
- PDR-1000 Dust monitors will be located downwind at the perimeters of the exclusion zones.
- Action levels to implement dust control will be sustained readings (5 minutes) above 5 mg/m^3 .
- Visual assessment of dust levels will be used to implement dust control.
- Dust control measures shall be water or dry agents during cold weather and shall be on-site at all times.

PERIMETER MONITORING:

Purpose: To identify and control off-site dust emissions.

- Determine strategic perimeter sampling locations based on wind direction, on-site operations, neighboring properties, public thoroughfares, and NJ DEP concurrence.
- DR-4000 respirable particulate monitors (PM-10) with omni-directional inlets will be used to measure levels of respirable dust at perimeter of the property.
- Action levels to implement dust control or to trigger monitor for specific contaminants of concern (i.e. PCB's) will be sustained readings (15 minutes) above 150 ug/m^3 as identified in the National Ambient Air Quality Standards (NAAQS). (See Attachment A-NAAQS Standards)

PERSONAL MONITORING:

Purpose: Evaluate worker exposure during normal work activities to be able to wear appropriate PPE.

- Determine personnel exposure of worker.
- Monitoring for total dust.
- Use pre-weighed filter cassettes and a low flow pump for dust sampling. (See Attachment B-Sampling Methods)
- Action level to implement upgrade of personal protection equipment (PPE) for dust is 15 mg/m^3 .

Based on the low levels of PCB's (Generally 2 ppm) the action level for dust that would trigger PCB concerns and monitoring is estimated at 500 mg/m^3 *. If this action level is exceeded monitoring for PCB's will require the following:



- Use sorbent tube and low flow pump for PCB sampling. (See Attachment B-Sampling Methods)
- Action level to implement upgrade of personal protection for PCB's is 0.001 mg/m^3 for the National Institute for Occupational Safety and Health (NIOSH) and 1 mg/m^3 for the Occupational Safety and Health Administration (OSHA). Tetra Tech recommends using the NIOSH standard as an action level for upgrading PPE.

****Formula to correlate PCB levels in soil to dust levels is:***

(Calculation: Convert PCB soil levels to a fraction ($2 \text{ mg/kg} = 0.000002$) and multiply by the particulate concentration). For example if the particulate concentration is at 500 mg/m^3 then the concentration of PCB in air is 0.001 mg/m^3 , which is the REL.

METEOROLOGICAL STATION:

Purpose: To record weather conditions related to the site.

- Determine location of METSTATION.
- Record daily the temperature, relative humidity, barometric pressure, wind speed and direction.
- Assess this information and correlate with particulate monitoring results.

REPORTING:

Purpose: To ensure communications between all parties.

- Progress reports will be submitted to Ford prior to the 1st and 16th of each month. Ford will issue reports to the NJDEP and municipal officials in accordance with the Administrative Order EA ID #: PI V1166.
- Progress reports will summarize results of the perimeter monitoring and meteorological information during that period.
- Final report will be generated at the end of the project and will include all perimeter monitoring results, meteorological information, and field documentation logs ensuring the effectiveness of the dust management plan. Ford will issue reports to the NJDEP and municipal officials in accordance with the Administrative Order EA ID #: PI V1166.

CONCLUSION:

Monitoring of dust levels will take place prior to removal activities, during removal activities, and after removal activities are complete.



ATTACHMENT A
(NAAQS Standards)



National Ambient Air Quality Standards

POLLUTANT	STANDARD VALUE *		STANDARD TYPE
Carbon Monoxide (CO)			
8-hour Average	9 ppm	(10 mg/m ³)	Primary
1-hour Average	35 ppm	(40 mg/m ³)	Primary
Nitrogen Dioxide (NO₂)			
Annual Arithmetic Mean	0.053 ppm	(100 µg/m ³)	Primary & Secondary
Ozone (O₃)			
1-hour Average	0.12 ppm	(235 µg/m ³)	Primary & Secondary
8-hour Average	0.08 ppm	(157 µg/m ³)	Primary & Secondary
Lead (Pb)			
Quarterly Average	1.5 µg/m ³		Primary & Secondary
Particulate (PM 10) <i>Particles with diameters of 10 micrometers or less</i>			
Annual Arithmetic Mean	50 µg/m ³		Primary & Secondary
24-hour Average	150 µg/m ³		Primary & Secondary
Particulate (PM 2.5) <i>Particles with diameters of 2.5 micrometers or less</i>			
Annual Arithmetic Mean	15 µg/m ³		Primary & Secondary
24-hour Average	65 µg/m ³		Primary & Secondary
Sulfur Dioxide (SO₂)			
Annual Arithmetic Mean	0.030 ppm	(80 µg/m ³)	Primary
24-hour Average	0.14 ppm	(365 µg/m ³)	Primary
3-hour Average	0.50 ppm	(1300 µg/m ³)	Secondary

* Parenthetical value is an approximately equivalent concentration.

ATTACHMENT B
(Sampling Methods)



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Guide to OSHA/NIOSH/ASTM Air Sampling Methods

Dust total nuisance

Chemical Hazard: Dust total nuisance

Agency Reference: [OSHA CSI](#)

Agency Standards

TWA (ppm): 15 mg/m³

Sample Volume (liter)

TWA: 720

Sampling Rate (ml/min)

TWA: 1500

Sampling Time

TWA (hours): 8

Analytical Method: GR – Gravimetric Analysis

SKC Equipment: Filter 225-8-01SC
Filter Cassette and Cyclone Holder 225-1
Filter Cassette 225-2LF

Footnotes: CSI-OSHA Chemical Sampling Information (OSHA CD-ROM)

Chemical Hazards by First Letter



Corporate Headquarters in the USA call 800-732-8472
563 Valley View Road • Eighty Four, PA 15330 USA

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Guide to OSHA/NIOSH/ASTM Air Sampling Methods

Polychlorinated biphenyls

Chemical Hazard: Polychlorinated biphenyls

CAS Number: 1336-36-3

Agency Reference: [NIOSH 5503](#)

Agency Standards

TWA (ppm): 0.001 mg/m3 (10 hr)

Sample Volume (liter)

TWA: 48

Sampling Rate (ml/min)

TWA: 100 (200)

Sampling Time

TWA (hours): 8 (4)

Analytical Method: GC-ECD -- Gas Chromatography-Electron Capture Detector

SKC Equipment: Filter [225-16](#)
Filter Cassette [225-32](#)
Sorbent Tube [226-39](#)

Limit of Detection: 0.03µg/sample

LOD Note:

The policies of the AIHA laboratory accreditation committee require that method detection limits must be established and